

Abstract of the Disclosure

A catheter-based system for accessing specific body cavities percutaneously and minimizing patient trauma is provided. In the preferred embodiment, in order to create an aperture at an access site in a patient's existing tubular body organ structure, a delivery sheath is passed axially along the interior of a portion of the existing tubular body organ structure to place a distal end of the delivery sheath near the access site. A centering wire is passed axially along the interior of the delivery sheath, piercing through from inside to outside of the patient's existing tubular body organ structure at the access site by causing an end portion of the centering wire to emerge from the distal end of the delivery sheath. A cutting catheter is passed substantially coaxially over the centering wire and axially along the interior of the delivery sheath. The aperture is formed by advancing a distal end of the cutting catheter through from inside to outside of the patient's existing tubular body organ structure at the access site and advancing the distal end of the delivery sheath through from inside to outside of the patient's existing tubular body organ structure at the access site.